

Yearly Review Rates Condition of Highways

2017 Level of Service Scores Show Litter/Debris Levels Got Worse in Past Year

Caltrans gave itself mixed grades on how well it performed its maintenance duties along the State Highway System in 2017.

The Department conducts yearly Level of Service (LOS) assessments on the thousands of lane-miles of highway, roadside acreage, culverts, signs, electronics and other transportation inventory in its 12 districts statewide. A numerical grade, with 100 being the maximum, is given by teams evaluating the condition of multiple transportation components that make up the highway system, based on guidelines established in the Caltrans Maintenance Manual.

It should be noted that 2017 assessment was conducted prior to the series of highway improvements funded by the Road Repair and Accountability Act of 2017 (Senate Bill 1). The extra revenue is financing more repair and rehabilitation work that should result in higher state LOS scores in the next survey.

The 2017 statewide LOS awarded higher marks, above a cumulative score of 70, in the areas of roadway lighting (99); potholes and “flexible” (generally asphalt concrete mixes) pavement, (87 each); graffiti (87); signs (85); striping (76); litter/debris (72); and traffic signals (70).

Scoring lower were the highway asset categories of tree/brush encroachment (68); guardrails (58); rigid (typically concrete slab) pavement, spalls (areas of deteriorated concrete) (52) and cracks (43); flexible pavement, cracks (43); and bridge maintenance activities (35).

Year-to-year improvements were made in the categories of bridge maintenance activities (11 points), guardrails (five points) and traffic signals (four points).

Scores in six of the categories for 2017 declined from the previous year. The most marked decrease was in the litter/debris category, which fell from an 81 LOS score in 2016 to 72 last year.

The uptick in litter statewide has been felt across the highway system. In response, Caltrans is deploying strategies to combat the epidemic of garbage, including expanding its program that employs parolees on litter



The overall condition of guardrails statewide improved significantly in 2017 from the previous year, Caltrans' Level of Service report found.

pickup crews, as well as starting a veterans outreach program that hires those with military service. Also, Caltrans' highly successful Adopt-A-Highway Program allows groups or individuals to help maintain sections of state highway roadside.

Caltrans uses the LOS as a performance evaluation tool for its highway components in each regional district. The scores help determine the number of field staff and resources, establish performance targets, and are used to justify resource allocation and modifications.

How LOS scores are determined:

- Evaluation segments are determined through random sampling, typically comprising 20 percent of the total one-mile segments of state highway in each Caltrans district.
- For public facilities such as rest areas, 100 percent are evaluated.
- A headquarters quality assurance team conducts random checks of the segments already evaluated by individual districts. The team conducts more evaluations

if the discrepancy between its scoring and the district's evaluation differ by more than 10 percent.

A segment's LOS score is based on the number of deficient areas for the category being assessed. If no deficiencies in a particular category was found along a "localized" highway section — defined as one-tenth of a mile — a 100 score would be awarded. If one category deficiency was found, an LOS score of 50 was given. More than one deficiency along a localized section resulted in a score of zero.

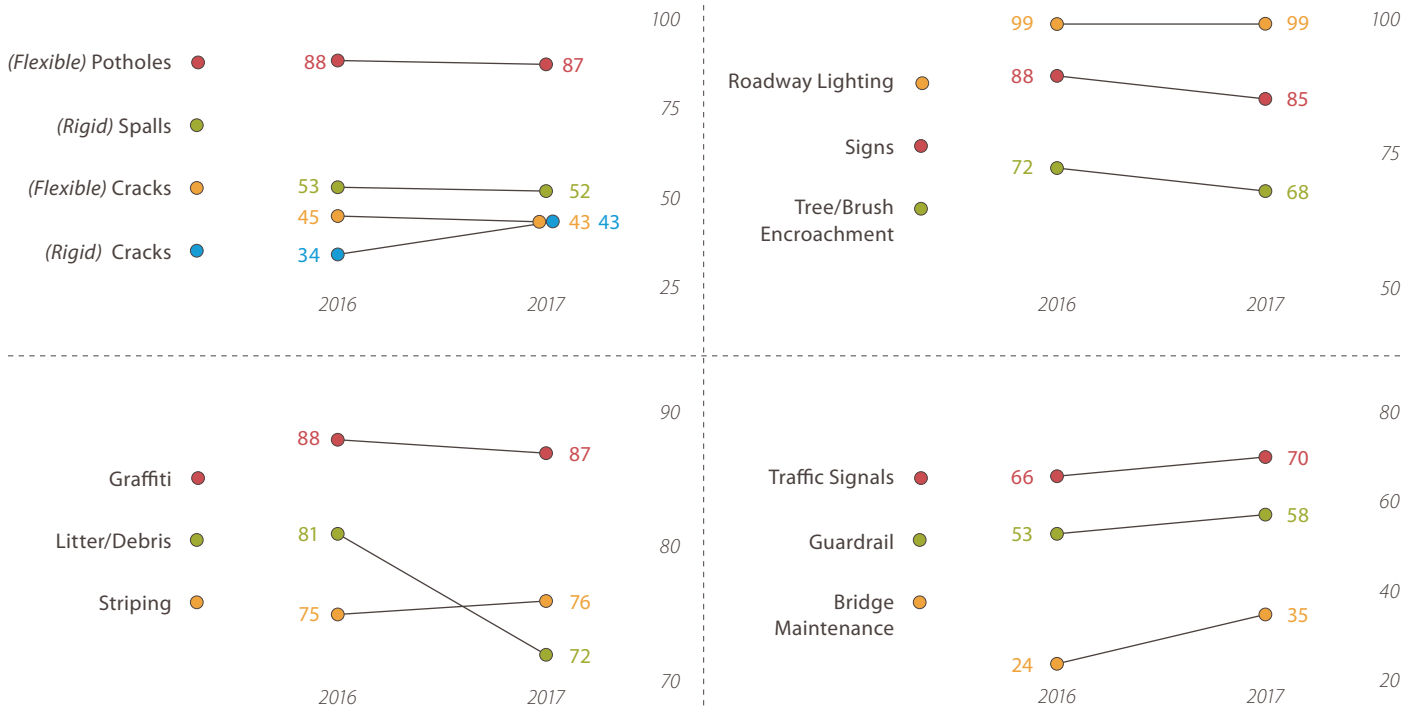
The segments are then averaged to determine an LOS

score for a given category. Some LOS scores can involve thousands of segments.

Caltrans' Maintenance Strategic Management Plan sets future performance targets for LOS categories. By 2021, for example, the plan calls for achieving an LOS of 90 or greater for safety-related highway elements such as guardrails and tree/brush encroachment. **MM**

Source: 2017 Level of Service report; Jason Probst, Strategic Planning Manager; Caltrans Division of Maintenance

Statewide Level of Service Scores



Highway Components Evaluated for Level of Service Surveys

Travelway	Rigid and Flexible Pavements	Landscaping	Weed Control, Irrigation System, Tree/Shrub Health and Prune and Encroachment, Ground Cover, Litter, Volunteer Plants, Mulch
Drainage	Surface Drains, Cross-Drains, Ditches, Slopes	Public Facilities	Rest Areas, Park and Ride Lots, Vista Points, Inspection Stations
Roadside	Roadside Vegetation, Litter and Debris, Graffiti, Tree/Brush Encroachment, Fences, Illegal Encampments	Traffic Signals	Signal Housing, Backing Plates, Visor, Cabinet, Handhole Covers, Pedestrian Signs and Push Buttons, Pull Box Covers, Pole Condition, Signal Indications (vehicle and pedestrian)
Traffic Guidance	Striping, Signs, Guardrail, Median Barriers, Attenuators, Pavement Markings, Reflective Markers, Night Inspections		